

04-12-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
REQUEST FOR FILING NATIONAL PATENT APPLICATION
under 35 USC 111(a) and Rule 53(b) WITH SIGNED DECLARATION

A
PATENT
APPLICATION

Asst. Commissioner for Patents
BOX PATENT APPLICATION
Washington, D.C. 20231

NONPROVISIONAL

Sir:

Enclosed herewith is the PATENT APPLICATION of

Inventor: Fergal Mohan et al.

Title: **Convergence-Enabled DVD and WEB System**

(Our Deposit Account No. 03-3975)

Our Order No.	74937	0269804
	Client #	Matter #
Atty. Docket	74937	0269804
	TMC#	Client Ref

including:

Date : April 10, 2000

1. ☒ Specification: 14 pages 2. ☐ Specification in non-English
3. ☒ Declaration ☐ Original ☒ Facsimile/Copy
- 3(a) ☒ Drawings: 2 sheet(s) ☐ informal ☒ formal
- 4 ☐ AMEND the specification please by inserting before the first line: --This is a [] Continuation-in-Part
[] Divisional [] Continuation [] Substitute Application (MPEP 201.09) of:
- 4(a) [] National Appln. No. filed --(M#)
- 4(b) [] International Appln. No. filed which designated the U.S.
- ☐ See top first page re continuing application ("X" box only if info is there).
- ☒ An Assignment and cover sheet. Please return the recorded Assignment to the undersigned.
- ☐ Prior application is assigned to by Assignment recorded , at Reel/Frame:
- ☐ **FOREIGN** priority is claimed under 35 USC 119(a)-(d)/365(b) based on filing in

Application No.	Filing Date	Application No.	Filing Date
(1)		(2)	

10. ☐ Certified copy/ies [] enclosed [] previously filed on in U.S. Application No. filed on
- 11 ☐ Enclosed: (#) Verified Statement/s establishing "small entity" status under Rules 9 & 27.
- 12 ☒ DOMESTIC/INTERNATIONAL priority is claimed under 35 USC 119(e)/120/365(c) based on the following provisional, nonprovisional and/or PCT international application(s):

Application No.	Filing Date	Application No.	Filing Date
(1) 60/129,724	April 16, 1999	(2)	

13. ☐ This application is filed under Rule 53(b)(2) since an inventor is named in the enclosed Declaration who was not named in the prior application
- 14 ☐ Preliminary Amendment:

	Mean	Standard deviation	Minimum	Maximum
Age	22.2	2.2	18	26
Gender				
Male	10.0	3.2	0	20
Female	12.0	3.2	0	20
Marital status				
Single	18.0	3.2	0	20
Married	2.0	1.4	0	4
Divorced	0.0	0.0	0	0
Widowed	0.0	0.0	0	0
Education				
High school	1.0	1.0	0	2
College	1.0	1.0	0	2
Postgraduate	0.0	0.0	0	1
Occupation				
Student	10.0	3.2	0	20
Teacher	1.0	1.0	0	2
Engineer	1.0	1.0	0	2
Manager	1.0	1.0	0	2
Other	0.0	0.0	0	1
Religion				
Hindu	10.0	3.2	0	20
Muslim	1.0	1.0	0	2
Christian	1.0	1.0	0	2
Jain	1.0	1.0	0	2
Buddhist	1.0	1.0	0	2
Sikh	1.0	1.0	0	2
Other	0.0	0.0	0	1
Income				
Less than 10,000	1.0	1.0	0	2
10,000 to 20,000	1.0	1.0	0	2
20,000 to 30,000	1.0	1.0	0	2
30,000 to 40,000	1.0	1.0	0	2
40,000 to 50,000	1.0	1.0	0	2
50,000 to 60,000	1.0	1.0	0	2
60,000 to 70,000	1.0	1.0	0	2
70,000 to 80,000	1.0	1.0	0	2
80,000 to 90,000	1.0	1.0	0	2
90,000 to 100,000	1.0	1.0	0	2
100,000 to 110,000	1.0	1.0	0	2
110,000 to 120,000	1.0	1.0	0	2
120,000 to 130,000	1.0	1.0	0	2
130,000 to 140,000	1.0	1.0	0	2
140,000 to 150,000	1.0	1.0	0	2
150,000 to 160,000	1.0	1.0	0	2
160,000 to 170,000	1.0	1.0	0	2
170,000 to 180,000	1.0	1.0	0	2
180,000 to 190,000	1.0	1.0	0	2
190,000 to 200,000	1.0	1.0	0	2
200,000 to 210,000	1.0	1.0	0	2
210,000 to 220,000	1.0	1.0	0	2
220,000 to 230,000	1.0	1.0	0	2
230,000 to 240,000	1.0	1.0	0	2
240,000 to 250,000	1.0	1.0	0	2
250,000 to 260,000	1.0	1.0	0	2
260,000 to 270,000	1.0	1.0	0	2
270,000 to 280,000	1.0	1.0	0	2
280,000 to 290,000	1.0	1.0	0	2
290,000 to 300,000	1.0	1.0	0	2
300,000 to 310,000	1.0	1.0	0	2
310,000 to 320,000	1.0	1.0	0	2
320,000 to 330,000	1.0	1.0	0	2
330,000 to 340,000	1.0	1.0	0	2
340,000 to 350,000	1.0	1.0	0	2
350,000 to 360,000	1.0	1.0	0	2
360,000 to 370,000	1.0	1.0	0	2
370,000 to 380,000	1.0	1.0	0	2
380,000 to 390,000	1.0	1.0	0	2
390,000 to 400,000	1.0	1.0	0	2
400,000 to 410,000	1.0	1.0	0	2
410,000 to 420,000	1.0	1.0	0	2
420,000 to 430,000	1.0	1.0	0	2
430,000 to 440,000	1.0	1.0	0	2
440,000 to 450,000	1.0	1.0	0	2
450,000 to 460,000	1.0	1.0	0	2
460,000 to 470,000	1.0	1.0	0	2
470,000 to 480,000	1.0	1.0	0	2
480,000 to 490,000	1.0	1.0	0	2
490,000 to 500,000	1.0	1.0	0	2
500,000 to 510,000	1.0	1.0	0	2
510,000 to 520,000	1.0	1.0	0	2
520,000 to 530,000	1.0	1.0	0	2
530,000 to 540,000	1.0	1.0	0	2
540,000 to 550,000				

15. Basic Filing Fee				\$690 / 345	\$ 345.00	101/201
16. Total Claims:	19	minus 20 =	0	x \$18/\$9 =	+	103/203
17. Independent Claims:	4	minus 3 =	1	x \$78/\$39 =	+\$9.00	102/202
18. If multiple dependent claim is present, add				+	\$260/\$130	+
19. TOTAL FILING FEE ENCLOSED =				\$ 384.00		
20. If "non-English" box is X'd, add Rule 17(k) processing fee				+	\$130/\$130	+
21. If "assignment" box is X'd, add recording fee				+	\$40/\$40	+
22. [] Enclosed is a Petition/Fee under Rule No.				+	\$130/\$130	+
23. TOTAL FEE ENCLOSED:				\$ 424.00		

CHARGE STATEMENT: The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fees which may be required under Rules 16-18 (missing or insufficient fee only) now or hereafter relative to this application and the resulting Official document under Rule 20, or credit any overpayment, to our Account/Order Nos. shown in the heading hereof for which purpose a duplicate copy of this sheet is enclosed. This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal form is filed.

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Express Mail Label: EL 423441335 US

Date of Deposit: April 10, 2000

I certify that this paper and listed enclosures are being deposited with the U.S. Post Office "Express Mail Post Office to Addressee" under 35 CFR 1.10 on the above date, addressed to Asst. Commissioner for Patents, Box Patent Application, Washington, D.C. 20231

Valero J. Valero

Valerie J. Harmon

Inventors: Fergal John Mohan et al.
App. No.: Unassigned
Filed: Herewith

Atty Dkt. 74937/0269804
Client Ref: ST-003(u)

Title: Convergence-Enabled DVD and WEB System

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(d) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am an official empowered to act on behalf of the small business concern identified below:

NAME OF CONCERN: Spruce Technologies, Inc.
ADDRESS OF CONCERN 10350 S. DeAnza Blvd., Suite 2A
Cupertino, CA 95014

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled as above and invented by LADABAUM, et al. described in the above-captioned specification.

If the rights held by the above-identified small business concern are not exclusive, each small entity, individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify under 37 CFR 1.9(c) as an independent inventor if that person had made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *Note: Separate verified statements are required from each person, concern or organization having rights to the invention, averring to small entity status (37 CFR 1.27).

FULL NAME of _____

----- [] INDIVIDUAL ----- [] SMALL BUSINESS CONCERN ----- [] NONPROFIT ORGANIZATION -----

I acknowledge the duty to file, in this case, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF SIGNATORY: Rainer Brodersen
TITLE: Chief Technology Officer
ADDRESS: 1054 S. DeAnza Blvd., Suite 200
Cupertino, CA 95129

SIGNATURE Kayla K...

DATE April 7, 2000

C:\TEMP\60122525_1.DOC

CONVERGENCE-ENABLED DVD AND WEB SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

This application is based on and claims priority from U.S. Provisional Application

5 Serial Number 60/129,724, filed on April 16, 1999 and hereby incorporated by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

10 The present invention is directed to interactive multimedia systems. More particularly, the invention is directed to DVD systems which are able to selectively control the processing of content from the World Wide Web and the like, and to web-based systems which are able to selectively access DVD systems and the like.

2. Background of the Related Art

15 Digital Versatile Discs (or variously Digital Video Discs or DVDs) and the World Wide Web (WWW) are extremely powerful interactive multimedia tools. However, they both have their drawbacks. Although DVDs are capable of storing large amounts of high-quality video and audio data, once they are manufactured their content is essentially static; it cannot be changed, updated or personalized. Also, the limited interactivity does not meet the demands of many of
20 today's computer-literate users. Further, although the WWW is dynamic and rapidly changing, it is not capable of providing high-quality multimedia content in real time for many users due to limited bandwidth.

SUMMARY OF THE INVENTION

The present invention has been made with the above problems of the prior art in mind, and a first object of the present invention is to provide a system for integrating static and interactive multimedia delivery systems such as DVD systems and the WWW.

5 It is another object of the present invention to provide a multimedia delivery system which is interactive and easily modifiable.

It is a further object of the present invention to provide a highly interactive and dynamic multimedia system which is capable of providing high-quality multimedia content.

10 The above objects are achieved according to an aspect of the present invention by providing a system which integrates a DVD system and WWW content or similarly presented information, such as HTML-formatted material. Universal Resource Locator (URL) information corresponding to sites or media streams accessible via the WWW or another content delivery system are stored in fields within the DVD data. When a user actuates a DVD element that has a corresponding URL the information from that site is displayed in a web browser to enhance the DVD viewing experience. Conversely, the DVD system can be controlled when the user actuates HTML information from a web page or the like. This arrangement provides for two-way control, i.e., HTML is able to control DVD content and vice-versa. Having the WWW information embedded in the DVD brings a number of benefits, perhaps the foremost of which is the ability to write a "one size fits all" template web page that can interrogate the DVD for URL information and present WWW content corresponding to the URL information and synchronized with the DVD content.

20

BRIEF DESCRIPTION OF THE DRAWINGS

These and other objects, features, and advantages of the present invention are better understood by reading the following detailed description of the preferred embodiment, taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a block diagram of an integrated DVD and web browser system according to a preferred embodiment of the present invention;

FIGURE 2 is an example screen showing DVD and WWW playback according to the preferred embodiment; and

FIGURE 3 is a flowchart showing the steps in displaying DVD content in conjunction with WWW or streamed media content in the preferred embodiment.

DETAILED DESCRIPTION OF THE

PRESENTLY PREFERRED EXEMPLARY EMBODIMENT

FIG. 1 shows an integrated DVD/WWW system (preferably known as a “Convergence Enabled System”) according to a preferred embodiment of the present invention. As is well known in the art, web browser 10 is preferably implemented on a personal computer or the like. The browser can preferably simultaneously display web content and DVD content or can be readily adapted to do so as will be apparent to those skilled in the art. Also, the DVD system 20 is preferably a DVD drive and associated support circuitry installed within the computer; however, a dedicated DVD player communicable with and controllable by the computer may also be used for this purpose. Further, DVD 70 played by the DVD system 20 is preferably specially authored as described in greater detail below.

In use, the browser 10 displays a web page 30 defined by, e.g., HTML code, and stored at a site specified by the user to the browser 10. The browser 10 may also display a separate or integrated playback field 40, i.e., a window, frame or other field) for video content from DVD system 20 or streamed content from the WWW, with synchronized audio from the DVD 20 or
5 streamed content played on the computer's speakers as is known in the art (see FIG. 2). Preferably, the playback field 40 is generated by a media player 80, such as the Microsoft Windows Media Player, with a call thereto embedded in HTML code for the displayed web page as is known in the art. Other multimedia players may also be adapted for this purpose as well.

As is known in the art, DVD systems may be configured to display buttons and the
10 like to enable a user to navigate the DVD 70 and access various portions thereof. In a dedicated DVD player, these buttons are accessed by a cursor controlled by cursor direction keys on the DVD player's console, remote control or the like; however, when a DVD is played in the computer using the media player 80, the buttons may be accessed by positioning or clicking the computer's mouse cursor on the buttons displayed by the media player 80 as is common with graphical user interfaces
15 as shown in Step 110 of FIG. 3. When this occurs, the media player 80 generates a Windows event message such as `EC_DVD_Button_Change` signifying that a particular button has been selected or actuated and providing its number (Step 120). In the preferred embodiment, this message is intercepted by an event script 50 which calls `DVDTextInfoParser` 60 (Step 130), a custom object that uses the current DVD button (provided by the media player 80 via
20 `EC_DVD_Button_Change`) and information extracted from a particular field within the DVD 70 corresponding to that button as described in greater detail below in order to obtain a URL (Step 140) that can be accessed by the web browser 10 and displayed on the web page 30 (Step 150).

More specifically, as is known in the art the media player 80 preferably generates information on the current status of the DVD 70 as part of its playback process. The DVD 70 is preferably authored to cause the DVD system 20 to write the index of the currently displayed menu into a specific General DVD parameter (GPRM) by, e.g., inserting DVD commands at strategic places into the DVD data set during its compilation. An example of a DVD authoring system which automatically performs this task is described in United States Patent Application No. 09/010,267 to Brodersen et al., incorporated herein by reference. A commercially available system which automatically performs this task is the DVD Maestro system of Spruce Technologies of San Jose, CA.

In Step 100, the media player 80 will then emulate this register information (the GPRMs) when playing DVDs; for example, the method in which the windows media player does this is explained in Microsoft's documentation for the program. The menu index thus obtained from the GPRMs in Step 142 can be used in Step 144 as an index into corresponding fields in the DVD's `TXTDG_MG` structure, also read in by the media player 80, which contains URLs stored there by the DVD authoring system. As detailed in the DVD specification, the `TXTDG_MG` structure within the DVD data includes various predefined fields holding specified information such as producer name, vocalist name, languages and the like, and a provider-unique field designated for such use may be used to store the URL. Thus, by monitoring the designated GPRM, an outside program such as the event script 50 can reliably derive the appropriate URL from the current menu index and the current button.

For systems using Microsoft DirectShow, the `DVDTextInfoParser` object (based on an ATL COM interface named `IDVDTextInfoParser`) can preferably facilitate playback of DVD 70 using the DirectShow `DVDGraphBuilder` interface; however, other

techniques also will be readily apparent to those skilled in the art. As described above, DVDTextInfoParser then accesses the DirectShow IDVDInfo interface to read in text data. This technique is used in the preferred embodiment; however, other techniques can be used with platforms on which DirectShow is not available; for example, the TXTDT_MG structure can be
5 directly read in from the DVD 70.

Preferably, event script 50 is a Java script; however, alternative implementations such as a Microsoft Visual Basic Script may be used instead. Also, DVDTextInfoParser 60 is preferably an ActiveX control using an ATL COM interface; however, other program implementations may be used as well. Further, although DVDTextInfoParser 60 may access
10 the DVD system 20 each time a URL is needed, in the preferred embodiment it preferably reads the TXTDT_MG structure into memory each time a DVD 70 is initialized, and references the information in memory. This is because the Windows Media Player used as the media player 80 in the preferred embodiment does not work well with other objects simultaneously accessing interfaces to the same DVD 70. If this problem is resolved in future versions of DirectShow, the
15 access-as-needed scheme might work equally well.

Thus, a "one size fits all" template web page could be made in which a field 40 displays DVD playback while a window 30 displays web content. When the user selects a button, the media player 80 generates an EC_Button_Change event which is acted upon by the event script 50 to call DVDTextInfoParser 60 based on the button number and menu title index
20 number to obtain the corresponding URL from the DVD's TXTDT_MG structure. The content corresponding to the retrieved URL is then displayed in the web page 30. Similarly, when an EC_Domain_Change or EC_Chapter_Change event occurs, DVDTextInfoParser 60 could be called to check for corresponding URLs and synchronize the web content in web page 30

to the current chapter displayed in playback field 40. If the corresponding URL content contains a reference to streaming content, the streaming video can be displayed in combination with or in place of the DVD content.

In a similar manner, HTML code in the web page 30 may make calls to the event script 50 or a similar script to retrieve the URLs stored in `TXTDT_MG` as will be readily apparent to those skilled in the art. These may then be displayed in the web page 30 as hyperlinks, controls or the like to enable the browser to display web content 30 corresponding to URLs in the DVD 70. Thus, rather than or in conjunction with controlling the system by accessing features of the DVD display 40 as described above, the system may be controlled by accessing features of the web page 30.

The above description of the preferred embodiment has been presented for explanation purposes only, and the present invention is not so limited. Modifications, embellishments and alternative implementations of the invention will be readily apparent those skilled in the art and are encompassed by the invention.

For example, in the preferred embodiment the URLs associated with the DVD menu buttons have been references to web pages or streaming video; however, the URLs may point to other types of resources and rely on the system to call appropriate helper applications; for example, a URL might point to a file in Adobe Acrobat PDF format, so that when the browser accesses it the Adobe Acrobat reader will automatically be called to display it. Even further, the URLs need not point to data files, but can also refer to programs which will be played when the corresponding buttons are actuated or the like.

Further, numerous practical applications of the invention will become apparent to those skilled in the art. For example, information on events and webcasts could be distributed in

the form of an electronic magazine. Consumers would receive the electronic magazine in the mail on DVD. The DVD can combine rich video content of the various artists and events, high quality samples of content (webcasts, etc.) to be purchased, interviews, concert information and the ability to purchase associated merchandise all on one disc. Since the disc uses high quality graphical elements that are assembled from an HTML template stored on a separate server, the viewer's experience can change as often as the DVD distributor wishes. In fact, different content may be served to different consumers based on parameters in the URLs. The fact that one disc can be a totally different experience for everyone that views it makes the system a highly flexible and effective advertising medium.

In another potential application, a DVD containing a business or sales training program produced to take advantage of many DVD features, such as Multiple Language Tracks and Multiple Camera Angles, could be distributed worldwide. Viewers could interact directly with the content and be qualified based on their performance. The DVDs would be usable at any time as an offline reference.

In yet another potential application, a professor works with his AV team to author several DVDs to be distributed to the students to take with them. The student may then view lectures and seminars from top professors from around the world in their own home. Classwork and tests could be administered remotely via each professor's website. Scheduled class hours with chat boards would give the student the ability to refer to every discussion that ever took place at any given time, and the DVDs could be saved as future references.

Such variations and implementations are to be considered within the scope of the present invention.

WHAT IS CLAIMED IS:

1. A system comprising:

a DVD unit for playing a DVD and generating information representative of the contents thereof;

URL deriving means for receiving the information and deriving a Universal Resource Locator (URL) from the information;

a browser for displaying content designated by the URL; and

a media player for playing video content within the information from the DVD.

2. The system of claim 1, wherein the URL deriving means comprises a DVD text information parser for receiving the information and parsing the information to derive data containing the URL therefrom.

3. The system of claim 2, wherein:

the DVD causes the media player to store indicia of a current position of play within the DVD; and

the DVD text information parser is for using the indicia to index into the control data to obtain the URL.

4. The system of claim 1, wherein the content specified by the URL is HTML-coded.

5. The system of claim 1, wherein the content specified by the URL is streaming media content.

6. The system of claim 1, wherein:
the media player is for displaying a menu button specified by the information from the DVD, the menu button being associated with the URL; and
the browser is for displaying the content specified by the URL responsive to user actuation of the menu button.

7. The system of claim 6, wherein:
the URL deriving means comprises a DVD text information parser for receiving the information and parsing the information to derive data containing the URL therefrom;
the media player is for generating a button number message responsive to the user actuation of the menu button; and
the URL deriving means further comprises an event script for receiving the message and responsive thereto calling the DVD text information parser.

8. The system of claim 6, wherein:
the URL deriving means comprises a DVD text information parser for receiving the information and parsing the information to derive data containing the URL therefrom;
the URL deriving means is further for reading control data from the DVD, the control data including the URL; and

the DVD text information parser is for using the button number message to index into the control data to obtain the URL.

9. A system comprising:

a DVD unit for playing a DVD and generating information representative of the contents thereof;

URL deriving means for receiving the information and deriving a Universal Resource Locator (URL) from the information;

a browser for displaying a hyperlink corresponding to the URL and, responsive to actuation thereof, content designated by the URL; and

a media player for playing video content within the information from the DVD.

10. The system of claim 9, wherein the URL deriving means comprises a DVD text information parser for receiving the information and parsing the information to derive data containing the URL therefrom.

11. The system of claim 9, wherein the content specified by the URL is HTML-coded.

12. The system of claim 9, wherein the content specified by the URL is streaming media content.

13. A system comprising:

a DVD unit for playing a DVD and generating information representative of the contents thereof;

URL deriving means for receiving the information and deriving a Universal Resource Locator (URL) from the information;

a browser for displaying a hyperlink corresponding to the URL and, responsive to actuation thereof, content designated by the URL; and

a media player for playing video content within the information from the DVD, the video content including a button associated with the URL;

wherein the browser is further for displaying content designated by the URL responsive to an actuation of the button.

14. The system of claim 13, wherein the information from the DVD includes positional information associated with the URL.

15. The system of claim 14, wherein the positional information indicates a position of the button within the DVD content.

16. A system comprising:

a DVD unit for playing a DVD and generating information representative of the contents thereof, the DVD information including a command to write a current position of the DVD into a general DVD parameter register of the DVD unit;

URL deriving means for receiving the information and deriving a plurality of Universal Resource Locators (URLs) from the information;

a browser for displaying content designated by the URLs; and

a media player for playing video content within the information from the DVD, the video content including a plurality of buttons associated with the URLs, the association between the buttons and URLs being responsive to positional information in the general DVD parameter register.

17. A system comprising:

a DVD unit for playing a DVD and generating information representative of the contents thereof;

a DVD text information parser for receiving the information and, based on positional playback data in the information, parsing the information to derive the URL therefrom.

a browser for displaying a hyperlink corresponding to the URL and, responsive to actuation thereof, content designated by the URL; and

a media player for playing video content within the information from the DVD.

18. The system of claim 17, wherein the information includes commands causing the media player to write the positional playback data in the media player's general DVD parameter registers.

19. The system of claim 17, wherein:

the information includes a data structure specifying a plurality of URLs; and

the DVD text information parser uses the positional playback data to index into the data structure to obtain the URL.

ABSTRACT OF THE DISCLOSURE

A system integrates a DVD system and a WWW web browser. Universal Resource Locator (URL) information corresponding to sites accessible by the browser are stored in fields within the DVD data. When a user actuates a DVD element that has a corresponding URL, the web browser displays information from that site. When the user actuates an HTML menu or other browser-implemented feature, the DVD system accesses a portion of the DVD data specified in the menu. This arrangement provides for two-way communication, i.e., HTML in the browser is able to control DVD content and vice-versa. Having the WWW information embedded in the DVD brings a number of benefits, the foremost of which is the ability to write a "one size fits all" template web page that can interrogate the DVD for URL information and present WWW content corresponding to the URL synchronized with the DVD information.

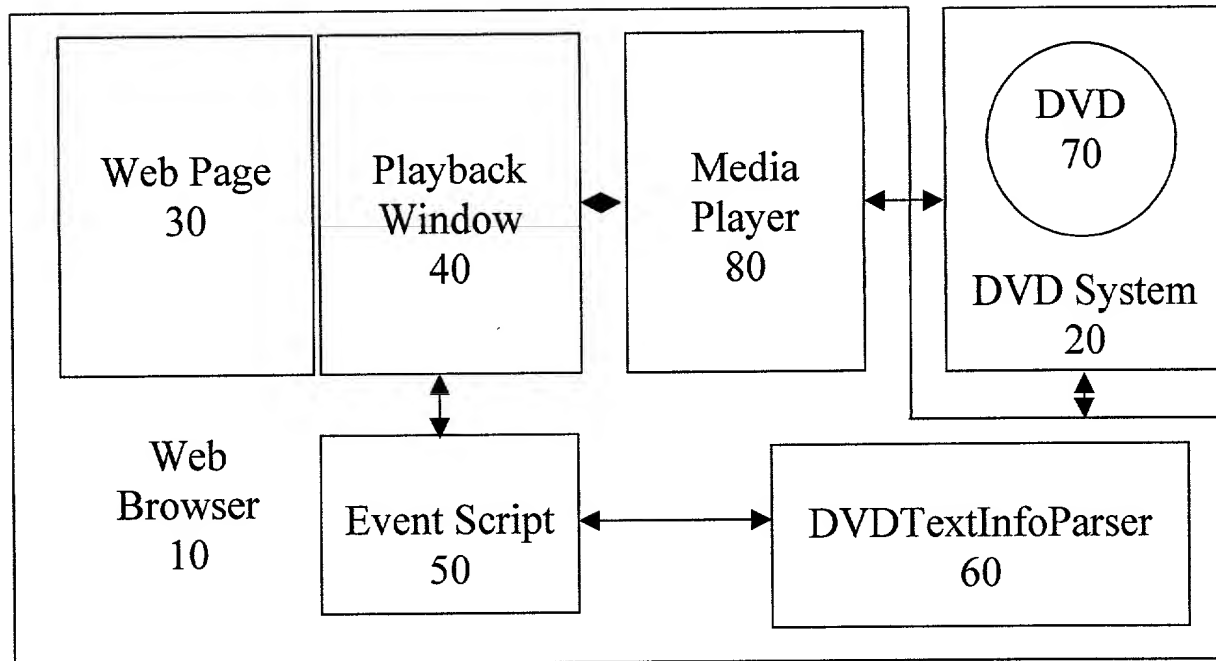


FIGURE 1

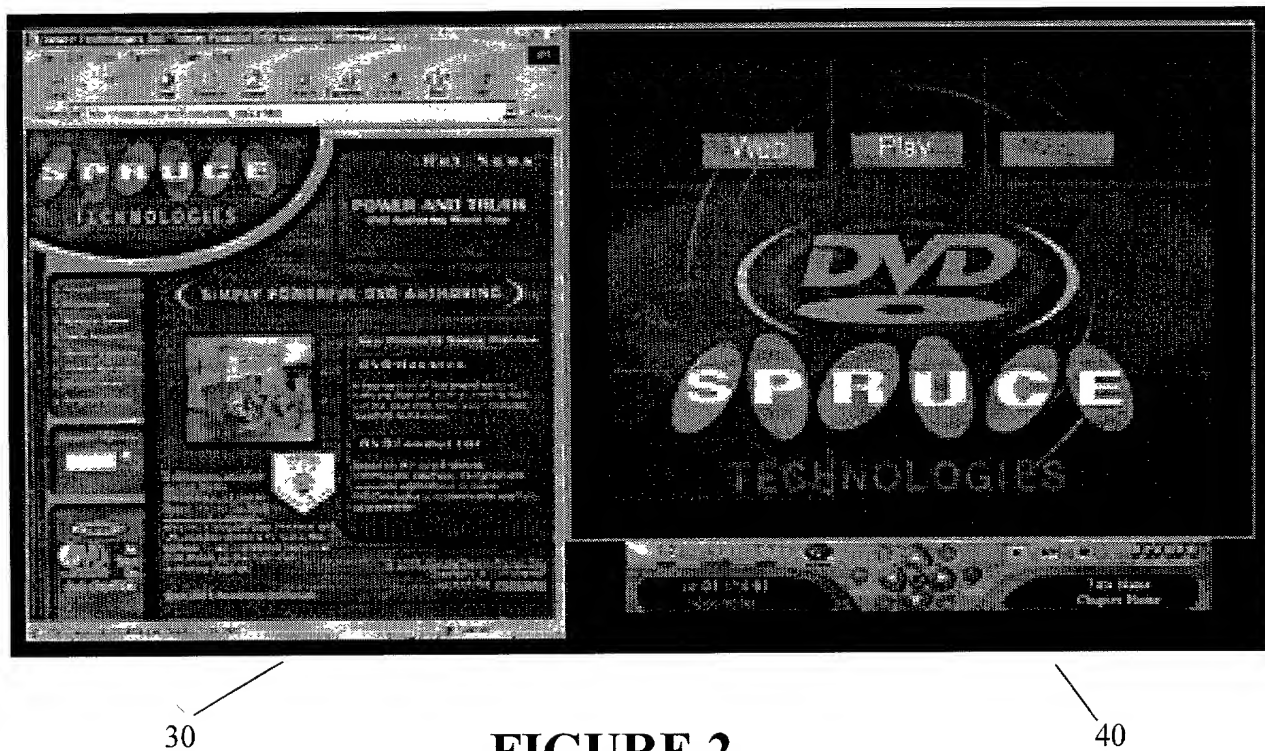
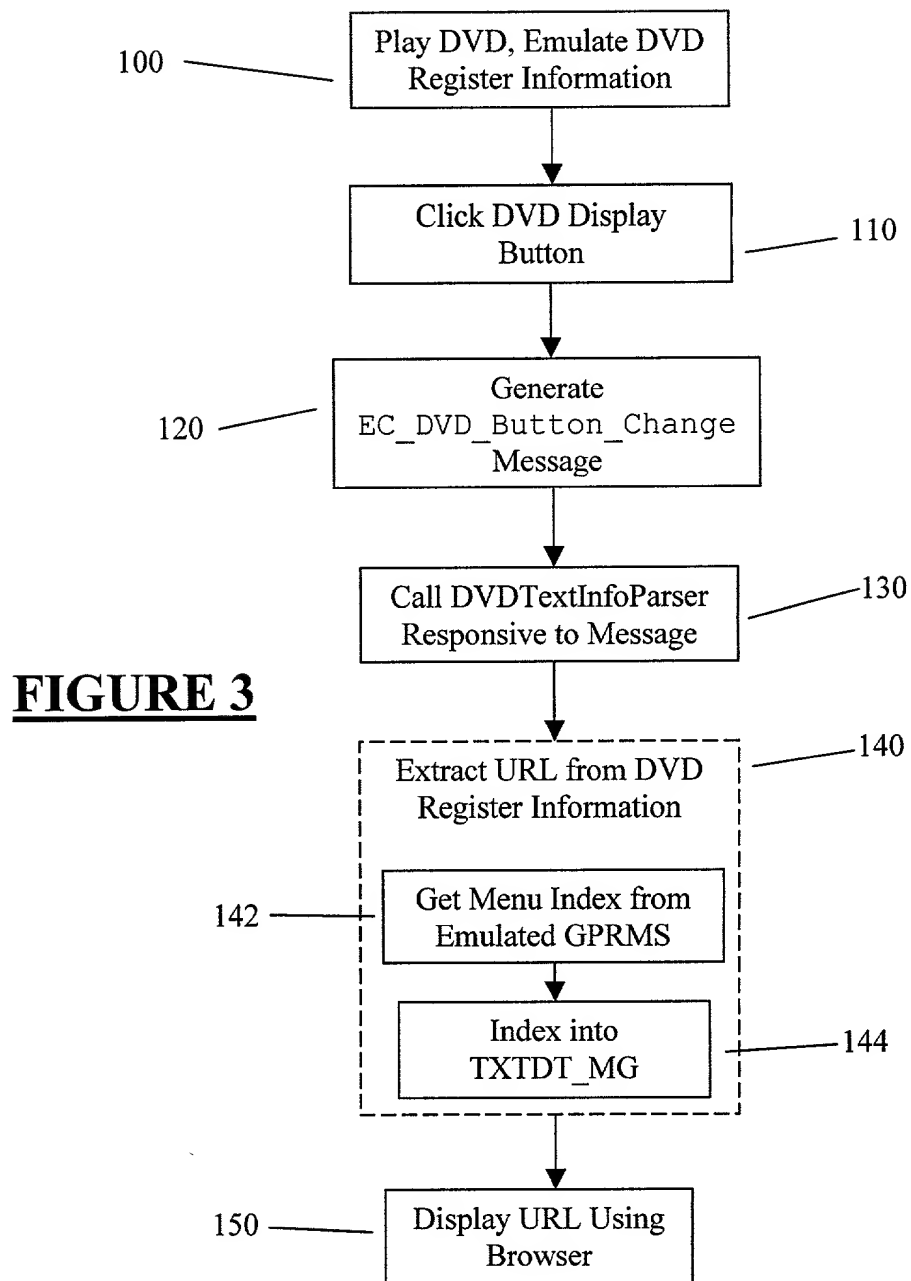


FIGURE 2



**RULE 63 (37 C.F.R. 1.63)
DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **Convergence-Enabled DVD and WEB System**, the specification of which is attached hereto, bearing Attorney Docket No. 74937/0269804

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate filed by me or my assignee disclosing the subject matter claimed in this application and having a filing date (1) before that of the application on which priority is claimed, or (2) if no priority claimed, before the filing date of this application:

PRIOR FOREIGN APPLICATION(S):			Date first Laid-	Date Patented	Priority Claimed
Number	Country	Day/MONTH/Year Filed	open or Published	or Granted	Yes <input type="checkbox"/> No <input type="checkbox"/>

I hereby claim domestic priority benefit under 35 U.S.C. 119/120/365 of the indicated United States applications listed below and PCT international applications listed above or below and, if this is a continuation-in-part (CIP) application, insofar as the subject matter disclosed and claimed in this application is in addition to that disclosed in such prior applications, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of each such prior application and the national or PCT international filing date of this application:

PRIOR U.S. PROVISIONAL, NONPROVISIONAL AND/OR PCT APPLICATION(S)		Status	Priority Claimed?
Application No.:	Day/MONTH/Year Filed:	pending, abandoned, patented)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
60/129,724	16/4/99	pending	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint Pillsbury Madison & Sutro LLP, 1100 New York Avenue, N.W., Ninth Floor, East Tower, Washington, D.C. 20005-3918, telephone number (650) 233-4790 (to whom all communications are to be directed), and the below-named persons (of the same address) individually and collectively my attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent, and I hereby authorize them to delete persons no longer with their firm and to act and rely on instructions from and communicate directly with the person/assignee who first sent this case to them and by whom I hereby declare that I have consented after full disclosure to be represented unless/until I instruct the above Firm and/or a below attorney in writing to the contrary.

Paul N. Kokulis	16773	Dale S. Lazar	28872	Timothy J. Klima	34852	W. Patrick Bengtsson	32456
Raymond F. Lippitt	17519	Glenn J. Perry	28458	Stephen C. Glazier	31361	Jack S. Barufka	37087
G. Lloyd Knight	17698	Kendrew H. Colton	30368	Paul F. McQuade	31542	Adam R. Hess	41835
Carl G. Love	18781	Paul E. White, Jr.	32011	Ruth N. Morduch	31044	William P. Atkins	38821
Kevin E. Joyce	20508	G. Paul Edgell	24238	Richard H. Zaitlen	27248	Paul L. Sharer	36004
George M. Sirilla	18221	Lynn E. Eccleston	35861	Roger R. Wise	31204		
Donald J. Bird	25323	David A. Jakopin	32995	Jay M. Finkelstein	21082		
Peter W. Gowdey	25872	Mark G. Paulson	30793	Michael R. Dzwonczyk	36787		

1. INVENTOR'S SIGNATURE:

Inventor's Name: **Fergal John Mohan**
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Post Office Address: **131 S. Mathilda Ave., Apt. B
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Date: 04/07/00
Country of Citizenship: **Ireland**

2. INVENTOR'S SIGNATURE:

Inventor's Name: **Rainer Brodersen**
Residence (City, State): **Santa Clara, California**
Post Office Address: **2373 Homestead Road
Santa Clara, CA 95050**

Date: April 7, 2000
Country of Citizenship: **Germany**

Rule 56(a) & (b) = 37 C.F.R. 1.56(a) & (b)
PATENT AND TRADEMARK CASES - RULES OF PRACTICE
DUTY OF DISCLOSURE

- (a) ... Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the [Patent and Trademark] Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability... (b) information is material to patentability when it is not cumulative and (1) It also establishes by itself, or in combination with other information, a prima facie case of unpatentability of a claim or (2) refers, or is inconsistent with, a position the applicant takes in: (i) Opposing an argument of unpatentability relied on by the Office, or (ii) Asserting an argument of patentability.

PATENT LAWS 35 U.S.C.

§102. Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless--

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months* before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

§103. Condition for patentability; non-obvious subject matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. Subject matter developed by another person, which qualified as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

* Six months for Design Applications (35 U.S.C. 172).